

# SPACE AGEING

**H**umans beings may not be able to survive for long in space without fundamental changes to their body systems due to lack of gravity.

Russian scientists reported that during Cosmonaut Romanenko's 326 days aboard the Soviet space station *Mir* last year, his height increased by 2.4 cm. Zero gravity seems to cause dramatic and possibly irreversible changes in the bone structure and nearly every system in the body changes after time in zero gravity. The body's metabolism ages rapidly, especially the nervous, immune and endocrine systems.

Human colonisation of Mars would not be possible unless these effects could be overcome, said Dr Percival

(Bones) McCormack of NASA's Life Sciences Division and chief medical officer for the US space shuttle program.

"Unless suitable countermeasures are taken a colony would die out, unless continually replenished with earth people," he said in Brisbane last October.

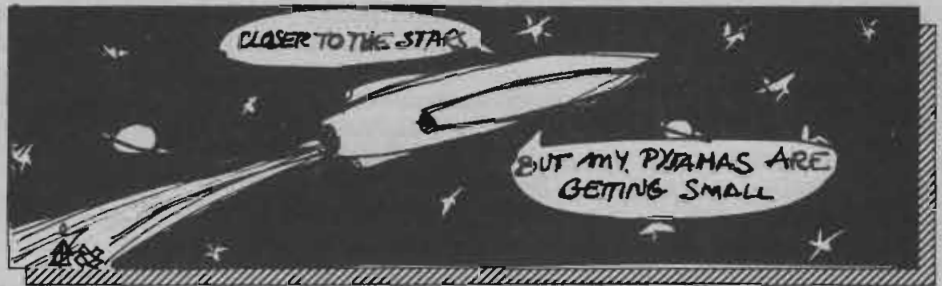
"While bodily systems usually

readapt quickly to earth's gravity after short flights, there is great concern that irreversible changes may occur in body systems during repeated or long-term exposure to space flight," Dr McCormack said.

"It will be an intriguing speculation to know what the people will look like - it's not clear.

"Certainly the bone structure of the body will change because we won't require large bones to withstand the stress of one G (gravity)."

Another alternative would be to provide 'artificial' gravity, centrifugal or otherwise.



# HOW TO RUIN AUSTRALIA

"For too long, too many companies in Australia have felt our national heritage has been their private property and thus theirs to chop down or degrade." These strong words from Federal Environment Minister Senator Graham Richardson last October were a harsh dose of ecological and economic reality at a time when national agricultural production has dropped by nearly 30% a year because of soil erosion.

"Our soils continue to blow away," the Senator's speech read at an address to the national conference of the Australian Conservation Foundation in Sydney. "We continue to lose native vegetation and habitat at a devastating rate.

"For every loaf of bread you buy produced from wheat grown on the Darling Downs in Queensland, 7kg of soil have been lost forever.

"How much longer before we hit bedrock?" The cost to restore degraded Australian lands in 1988 was \$2,000 million, an amount not made available for the purpose. This burden will compound until the present unsustainable

agricultural system is replaced and the land revitalised. Over 55% of arid lands and 45% of non-arid areas need treatment for land degradation.

Since European colonisation, more than two-thirds of the original tree cover has been removed and over three quarters of our rainforest has disappeared. About 2,200 plant species including a quarter of all gum trees are under threat of extinction.

"While the miners push their barrow for the right to easy access to ever more of this continent, the stark reality of how much has already been lost is often ignored," the Minister would have said - if not for the fact he was stranded in Queensland by a strike. His speech was delivered by Federal MP Steve Dubois, ALP Caucus Environment Committee Chairman.

"Producers have dominated land use decision-making in this country for the past 200 years, more often than not at the cost of the environment," said Mr Dubois.

"We are now paying the price."

## Native Animals Save Land

Kenyan rancher David Hopcraft has been conducting experiments on his land on the Athi Plains, 40 km from Nairobi, to demonstrate that Africa's own animals have a profound effect on its soil and plants.

Stocking cattle and gazelles on adjacent plots of land, he's discovered it's environmentally and economically wise to raise native animals rather than livestock.

The land plots occupied by native gazelles grow thriving grass, whereas plots occupied by imported cattle grew only sparse vegetation.

Cattle cause a big loss of grass cover, especially around waterholes - at which they must drink more often than native wildlife. But Mr Hopcraft says the real key is a hormone in indigenous animals' saliva, faeces and urine which acts as a catalyst to boost local plant growth.

In Kenya's Rift Valley 25 years ago he saw dust storms that were the first signs of desertification.

"People said it was just overgrazing. But then I realised that could not be because there were fewer animals there than I had seen in wildlife areas," he said. After a master's degree in wildlife science at Cornell University and experiments on his 8,000 hectare ranch he is convinced native wildlife is good for the land and that imported livestock harm it.

Mr Hopcraft encourages meat eaters to switch to a diet of native animals and raises about 15 species on his ranch for consumption in Nairobi restaurants. Farming native animals requires less in the way of water supply, fencing, fuel, pumps - and researchers trying to find new ways of keeping cattle alive.

Reuter

# Fire from Water

**Australian inventor Yull Brown has found a way to economically split water into hydrogen and oxygen - a breakthrough which gives us water-powered welding and offers functioning, water-powered transport in the near future.**

In a cramped workshop at the back of a suburban house in Auburn in Sydney's west, Mr Brown has developed the first commercial product based on the energy resource of the future - water. Scientists only recently started to take seriously the notion of a future "hydrogen economy" based on electrolysis of water, where an electric current is used to separate it into hydrogen and oxygen.

These two gases are usually highly explosive and are used as rocket fuel. Some scientists have refused to witness his experiments because of the explosiveness of hydrogen and oxygen.

But Mr Brown has been able to tame the mix into a safe gas, known as *Brown's gas* - using a specially designed electrolysis cell which doesn't separate the two gases at their origin, as is done conventionally. After 15 years work and a million dollars in development, he's launched a welding system based on his process.

He predicts cars and aeroplanes running on water supplied from the garden hose and powerlines replaced by pipes carrying gas to be reconverted to electricity.

When he arrived from Bulgaria in 1957, Mr Brown's qualifications as an electrical engineer weren't accepted. Now he's one of Australia's best known inventors (and least-recognised scientists).

His inventions have been dismissed as elaborate trickery, yet Mr Brown has covered his technology with over 100 patents in 31 countries and recently floated a \$1 million company on the second board of the Hobart stock exchange.

The first commercial technology of its kind, the gas in Mr Brown's welding system has extraordinary features and doesn't seem to produce harmful light or vapours. At one moment the flame can be the temperature of a candle and you can wave your finger through it. *Then, without adjustment, it will melt and split granite or fuse metal and house bricks together*, although industrial gas experts swear this is impossible and scientists who have witnessed it are at a loss to explain

the principle.

Mr Brown theorises that the temperature of the flame is determined at the surface of the material through an "interactive process" between the hydrogen molecules and atomic bonds in the object. He's now taking orders for his welder (A\$4,500) and a larger version of the device is about to be sent to the United States to test its ability to destroy plutonium and other toxic waste.



Mr Brown ... his gas burns a hole through a house brick — Picture: ALAN PRYKE

The Brown's gas generator and welder has up to 30 different applications. To operate it, water is pumped into the unit and the hydrogen and oxygen are separated and compressed to form a gas. Brown's gas can be used as a flame or energy source; for use as an energy source it's detonated by a spark that forms a vacuum. Atmospheric pressure then sucks water or any other liquid through the container or hollowed area. When set alight it can reach 6,000°C - as hot as the surface of the sun.

"The flame created by the generator is the highest temperature on Earth and can turn tungsten to vapour or gas," Mr Brown said last March. He successfully ran a car engine on water using the device and is researching the possibility of simply installing the generator in existing cars. Electricity and water are all that's needed to run the unit, which is cheaper than most conventional generators.

## Scientific Demonstration

Professor Brynn Hibbert, professor of analytical chemistry at the University of New South Wales, recently arrived from Britain where he held senior posts researching fuel-cell technology. He said that he'd usually be a "bit twitchy" about working with hydrogen and oxygen, but took part in a demonstration of Brown's gas in October anyway.

He said afterwards that on face value Yull Brown seemed to have found a way of efficiently producing a mixture of hydrogen and oxygen that was safe to use.

"What may enrage the scientific community are some of the claims that this gas has very special properties."

"One of the more extravagant of these is that the gas produced in his process will destroy unwanted plutonium and also produces heavy water.

"There is a whole range of criticisms directed at this based on what is the known chemistry of these type of gases, through to our knowledge of thermonuclear reactions."

Mr Brown's most contentious suggestion was that *additional rare hydrogen and oxygen atoms*

were generated in his process. Professor Hibbert said that *from what was known* of these atomic species they'd be too short-lived to travel out of the electrolytic cell and down the gas hoses, but admitted he had no explanation as to why the gas performed in all the ways he had seen demonstrated.

At Mr Brown's invitation, Professor Hibbert left the Auburn workshop carrying one of the electrolytic cells that is the secret to Mr Brown's technology under his arm.

The use of Brown's gas for transportation and energy generation is the best way so far demonstrated to overcome the greenhouse effect economically, effectively and quickly. If put into immediate application, much of the threat to the biosphere of Planet Earth will be immediately removed ★

- R.A.

SMH 13-9-88 & Aust 30-3-88

## In Pursuit of the Elixir of Youth

Hot in pursuit of the 'holy grail' of eternal youth, Professors Keith Cairncross and Arthur Everitt at Sydney's Macquarie University have been observing rats which have been denied the use of their pineal gland for three years.

Without their pineal glands the rats became hyperactive, couldn't sleep and had difficulty coping with normal activities.

"This all creates stress which enhances the aging process," according to Professor Cairncross.

Located deep in the mid-brain, the pineal gland has been a source of fascination and mystery for many cultures. The Greeks knew it as the eye of *Cyclops Polyphemus* ('one eye of many lights') and considered it the organ of 'mind and spirit'. French philosopher Rene Descartes (I think ergo I am) considered it the link between the material and spiritual worlds. Darwin described it as a 'vestigial' organ - defunct, degenerate. To many it is the mysterious 'third eye' and gateway to the 'astral planes'.

The pineal gland's mythology has made contemporary medical researchers unable to resist checking to see if there's anything in all this 'voodoo'. Enticing them is the vital link found between the hormonal secretions of the (rat) pineal gland and mechanisms that help mammals cope with changing environment and stress.

The research links a decline in the production of pineal hormones with conditions associated with ageing, such as arthritis and conditions affecting the spine, arteries, lungs and skin. These generally arise due to the deterioration of *collagen*, the connective tissue of the body. With age this tissue loses its elasticity and the dreaded wrinkle appears.

From this researchers have deduced that a synthetic hormone *melatonin* could reverse this deterioration. Melatonin inhibits the pituitary gland (located in the frontal mid-brain), which other research links to ageing.

During sleep, immune processes involved with healing and regenerative functions are activated by increased production of natural melatonin; but as age increases (or sleep decreases) this production declines and the pineal becomes a vestige of its younger self. Macquarie researchers consider the synthetic melatonin may revitalise the process and lead to regeneration and rejuvenation of the body.

Professor Cairncross is ecstatic;

"I think by next century more and more people will be much healthier in their old age, and able to extend their lives to 120 years, which seems to be the natural limit." (According to *Genesis XI v 3* "(man's) days will be 120 years", which leaves us to wonder just where that estimate of medical research comes from)



## Computer Miscarriage

A spate of deformed babies born to computer operators at the *Toronto Star* in 1979 raised questions about the safety of pregnant Canadian and US women working at computers.

New data shows that the risk of miscarriage almost doubled among a group of women who worked at computer terminals for more than 20 hours a week during the first 12 weeks of pregnancy.

The research was done by Health Insurance company Kaiser Permanente on 1,583 pregnant women attending obstetrics and gynaecology clinics in northern California. The risk of both early and late miscarriages increased by about 80% for all women working over 20 hours a week, compared with women who did similar work without computers. Administrative and clerical workers had a miscarriage risk 240% the rate of non-exposed workers. There's still no conclusive

## Pre-Columbian Tomb Complex Unearthed

Archaeologists in Peru have found what's been described as the richest cache of pre-Columbian artifacts ever uncovered in the Americas - a mausoleum of rulers.

The 1,500 year old tomb complex was found 650 kilometres north-west of Lima, near the coastal village of Sipan, by a team led by Walter Alva of the Bruning Archaeological Museum in Lambayeque. The major tomb so far opened holds the body of a high priest-warrior of the Moche people, a pre-Inca culture of farmers, artisans and warriors who lived in a 320 kilometre stretch of Peru from around 250 AD until 750 AD, when they mysteriously disappeared.

Detailed records of their time in pictorial form on decorated pottery have hitherto been found, which describe a supreme figure who appears to be the principle occupant of the Sipan tomb. He was in his early 30s at death, and was buried with three other men, two young women and a dog.

Also found in the tomb was a gold face mask, two strands of large gold and silver beads shaped as peanuts, a solid gold crown and knife, ceremonial rattle of hammered sheet gold and a gold shield weighing almost a kilogram.

*New York Times*



statistical proof linking computer use with birth defects.

The idea that terminals could be harmful was initially dismissed because they emit only small amounts of ionising radiation, but recent suggestions that weak electromagnetic fields interact with the body has refuted the debate.

These non-ionising (radio wave) electromagnetic radiation from terminals may be a different matter. An independent Swedish experiment has shown an increase in foetal deaths in mice exposed to simulated computer fields. In Sweden, terminals must be encased in an earthed cage. A recent US Office of Naval Research project reported that a pulsed magnetic field caused abnormalities in chicken embryos. Some unions are calling for pregnant workers to be transferred from terminals.

*London Observer; American Journal of Industrial Medicine*



# The Gaia Project

## Megalithic Radiation

The Gaia Programme is an independent plan to monitor radiation at standing stones around the British Isles.

Starting in 1983, Geiger counters were used to measure radiation - in three minute readings at various stations inside megalithic sites and in the cardinal directions radiating up to a mile out from them - to seek local radiation anomalies.

25 stone circles, 2 megalithic mounds and 3 henges were carefully examined, along with 'control' areas which didn't contain megalithic sites.

One complex of stone circles on Arran Island known as Machrie Moor is comprised of granite and sandstone blocks. Some megaliths in the complex are very tall, and some circles have been recovered from peat. In legend the highest concentric circle (Machrie Moor 5) is where the giant Fingal leashed his dog, Bran, while he boiled his cauldron in the inner ring. Six concentric circles in the complex were tested and it was discovered that all appear to be in *localised low radiation areas*, relative to the general background count for up to half a mile in the four cardinal directions.

### Higher Levels

All the actual circles showed higher readings than general and immediate background radiation levels. Circle MM1 showed readings 50% above its immediate background while MM2 was 30% above. Both these sites were less than 12% higher than the *general* background level, however; the areas immediately around the circles show lower levels of radiation compared to the general background, while the circles are 'high' points within these.

Concentric circle MM5 was carefully studied and averaged 33% above background readings. A 1988 Geiger counter examination of the same site also gave a reading 45% higher than 300 yards away.

The average radiation reading at a nearby control site was 5% above the average of the general background count and identical to the area around it.

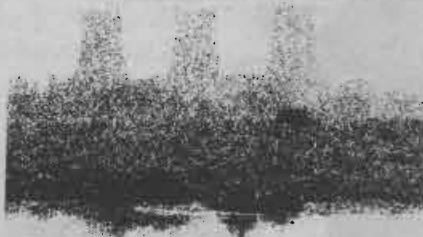
At another site, Loch Buie on Mull, an average count some 23% higher than background average was found by the Gaia Project, which also noted magnetic anomalies here. The highest reading within this circle came from the very centre of the ring.

One of the most complete surveys conducted by a Gaia team comprised readings taken on two days - before and during the 1983 Summer Solstice at the Callanish complex on the Isle of Lewis. On June 20th the site average was 10% above the background count, but on June 24th the site measured up to 32% above background. In these two sessions stone readings at most points within the site remained constant, but certain stones roughly *doubled* their count on June 24th compared with June 20. One stone in the circle's southern alignment gave 10 cpm on the first day but 22 cpm on June 24th. How could conditions on Old Midsummer's Day be so different from those a few days earlier?

It's unknown as yet whether these anomalies are due to geological factors; granite itself emits radiation, but the findings are inconsistent with what could be expected from such a simple explanation. Some sites, albeit damaged ones, showed few or no radiation anomalies.

Are these ancient megalithic structures constructed around anomaly areas, and if so, why? Or do the constructs themselves generate the anomalies? At last science has something it can get its teeth into to study the stone sites of the ancients.

*The Ley Hunter*



### SMOG SNIFFER

The CSIRO has developed a device that can find a single source of pollution in photochemical smog.

The Airscan device was unveiled last September by the CSIRO's division of coal technology and is expected to be commercially available by the middle of 1989.

According to a principal researcher in the division, Graham Johnson, the device is powerful enough to discover whether there is an illegal source of pollution within a single suburb and how recent the emission was.

## Justice Blind to Pine Gap Protestors

Ken Mant-Nath was arrested and charged with trespass at the October 1987 protests outside the USA's secret military surveillance and research facility at Pine Gap in the Northern Territory, along with Senator Jo Valentine and Limbo Lenin.

For both Senator Valentine and Limbo the outcome was conviction and fine. Senator Valentine accepted this decision, but on principle chose imprisonment rather than pay the fine. As an *elected state member* of the Commonwealth parliament, and thus representing the broader political aspirations of Australians, Senator Valentine's decision clearly demonstrated that the present Federal government will defend USA military rights in Australia, even if it means 'imprisoning' its own Senators. That is who was represented in court while Senator Valentine stood before the bench. Limbo Lenin chose the other option and is appealing.

### Nuremberg Principle

Legally Senator Jo and Limbo's defences were based on a technical argument based on the Nuremberg trials which set the *interna-*

*tional* precedents that determine whether or not a military facility is 'lawful'. These trials determined that certain Nazi facilities were not lawful military defences, as part of their intention was for direct use against *citizens* outside any military conflict.

Lenin and the Senator pointed out that Pine Gap was an intrinsic part of the USA's nuclear arsenal and that under the terms of MAD (Mutually Assured Destruction) directs nuclear weaponry as much against *citizens* of nations as it does against their military forces. In effect this makes *all* nuclear weaponry and what helps deliver them 'unlawful'. As Australia recognises this via external agreements, Pine Gap's presence is *internationally* unlawful as it is directing nuclear weaponry against citizens of other nations.

It was put to the court that the defendants had a 'lawful excuse' for entering Pine Gap as they sought to inform the personnel there that they were engaged in unlawful activities. The court considered this defence contained "not any genuine element of defence to the particular charge".

Ken Mant-Nath's defence followed an entirely different argument that sought to es-

tablish that the defendants had a 'lawful excuse' for their trespass as each was endeavouring to prevent unlawful activities taking place at Pine Gap. Ken claimed Pine Gap was unlawful under the terms of section 44 (1) of the Australian Constitution.

### Unconstitutional?

Ken's point is that, as Pine Gap is a *foreign military* facility sanctioned by the sitting members of Federal Parliament, *it is an acknowledgment by these members of an allegiance, an adherence and an obedience to a foreign power*, in this case the USA. Under section 44(i) of the Australian Constitution members are disqualified from sitting in the Federal parliament, *if there is any acknowledgment by members of an allegiance, adherence and obedience to a foreign power*. This section prevents members using the power of the parliament to serve foreign interests

Ken's defence argues that the powers of the Parliament(s) directed by these sitting members are 'unlawful', including any use of those powers in respect of Pine Gap. His 'trespass' was an attempt to inform those at Pine Gap that they were being given their directives by 'unlawful' authority and were acting "unlawfully" while following these directives. This defence was also ruled as having 'no genuine element of defence' by the court and was dismissed as a frivolous waste of time.

The question of the constitutional legality of Pine Gap still remains to be settled.

## Space Pollution

At least 48,000 human-made objects larger than a centimetre in diameter are now orbiting the Earth, causing a major nightmare for the space programme. Seven thousand of these bits of junk are over 10 centimetres across, according to the Massachusetts Institute of Technology. Other studies place the number of objects at 70,000.

Operating spacecraft make up only 5% of the objects; 12% is debris such as packaging material, 14% is old rocket casings and 20% is spent payloads. The rest is just junk.

The new space station *Freedom* (see news item) will have to be shielded against the shrapnel-like impact of space junk.

But the major problem is that of orbiting nuclear-powered satellites - which sometimes drop their deadly payloads back to Earth. The USSR is believed to have launched 30 nuclear powered satellites.



Last year scientists discovered that a major cause of the mass death of seals throughout the Atlantic Ocean and North Sea is the canine distemper virus. Now it seems that diseased bodies of more than 1,000 dogs dumped off Greenland may have caused the epidemic that has killed off at least 11,000 seals in Northern Europe.

A.P.

## What to do with a radioactive town?

Soviet authorities are planning to bulldoze the radioactive 800-year-old town of Chernobyl (population 10,000) to rubble. The Ministry of Nuclear Power has begun razing homes and sees no alternative to destroying the town.

Radiation levels at Chernobyl were recorded at 0.1 milliroentgen per hour last June, twice that of the Ukrainian capital Kiev, 130 kilometres south. Gden, another town 18 km from the plant, has been 'successfully decontaminated', according to *Pravda*.

Writer Whitley Strieber reports in his new book *Communion* that Chernobyl means Wormwood in Ukrainian. Wormwood was the star that poisoned a third of the Earth's waters in the old book *Revelations*. 'Cherno' also means 'black' in Ukrainian.

# WORLD GRAIN STOCKS RUNNING LOW

The near future will reveal many results of current changes in world weather and rainfall patterns due to the greenhouse effect which have been barely mentioned amid the flurry of reports on temperature and sea level rises, ozone levels and atmospheric pollution. It only takes a minor shift in rainfall and temperature patterns to rock the real foundations of world civilization - the food supply.

A recent report shows that world stocks of wheat and coarse grain could be down to less than 59 days supply by June 1988.

The United Nations Food and Agriculture Organisation (FAO) said in its latest food outlook that world cereal output would fall for two seasons in a row for the first time in 40 years. FAO is forecasting a drop in international grain stocks to below the "minimum level considered necessary to safeguard food security."

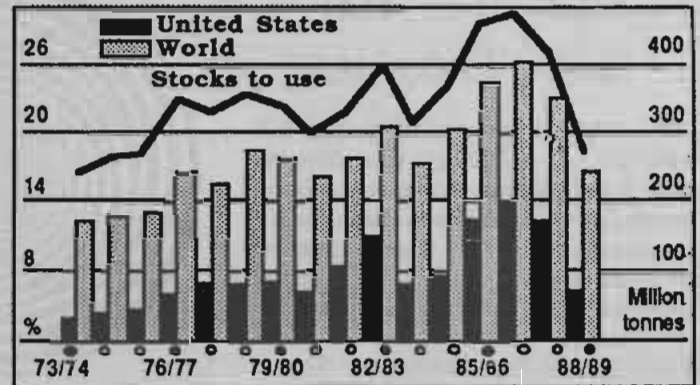
World grain stocks are likely to plummet by 114 million tonnes in 1988-89 - the biggest single-year drop on record. Figures from the US Agriculture Department and the International Wheat

Council indicate a drop of 31 million tonnes in coarse grain stocks by June 1989, cutting stocks to less than 59 days for the world - the third lowest level on record.

"The effects of the North American drought will be far more pronounced in 1989-90, when the stocks are gone and the world is totally reliant on the 1989 harvest," said Mr Peter Perkins, chief commodities analyst with the Australian Bureau of Agriculture and Resource Economics. World cereal production for 1989-89 is now forecast at 1,551 million tonnes - 58 million tonnes less than last year.

The main factor in the decline in world stocks has been the North American drought, which is believed to have cut US and Canadian crops by 110 million tonnes.

Based on USDA data, in June 1989 the world will have about 59 days supply of wheat and coarse grains in stock, in



contrast with 89 days last year - and 56 days at the worst recorded level in 1972-1973.

In Australia, most media discussion has been about how much money we're likely to make from the potential starvation of the rest of the world. Moral questions aside, much of this debate assumes that Australian weather will remain roughly 'average'.

But rainfall is rising in eastern Australia while the west - including large grain-growing areas - is drying out. Just because Australian rainfall is rising generally doesn't mean we're immune to major problems arising from shifts in weather patterns.

## Mystery Death Toll Reaches 13

A Marconi marketing director is the sixth person connected to the electronics company and the 13th British defence scientist to die in unusual circumstances in the past 2 years.

Peter Ferry, aged 60, appears to have killed himself in September by inserting mains electric wires into his mouth and turning on the power. Lights at the Marconi command and control centre in Frimley, Surrey, where Mr Ferry's body was found in his flat, dimmed and the computers blacked out for a time.

Police said they were treating his death as "neither suspicious nor accidental". A post mortem showed death by electrocution.

Marconi, part of General Electric and headed by a former Cabinet minister, had major contracts with the Ministry of Defence but is being investigated for allegedly over-pricing defence contracts for a decade.

The Marconi deaths include:

\*David Sands, a project manager working on secret satellite radar at the company's Easams



division at Camberley, died when his car, carrying cans of petrol, crashed into a disused restaurant at 130 km/h. The inquest returned an open finding.

\*Vimal Dajibhal, a project manager doing low-security work for Marconi Underwater Systems, was found under a suspension bridge at Bristol with a rope around his neck, his trousers around his ankle and a tiny puncture wound in a buttock. An open verdict was recorded.

\*Trevor Knight, a computer manager for Marconi Defence Systems, was researching guided missiles. He was found dead in his fume-filled car. Verdict: suicide

\*Ashad Shariq, a Marconi computer analyst,

found dead in his car with a rope around his neck, connected to a tree. Suicide verdict.

\*Victor Moore, who worked at Marconi Space and Defence Systems, died of a drug overdose. Verdict: suicide.

\*Last year Russell Smith, a scientific officer at the ultra-secret UK Atomic Research Energy Plant near London, was found at the bottom of a 46-metre cliff near Camelford, Cornwall. Verdict: suicide by jumping.

A Marconi spokesperson insists the deaths are not connected.

A former colleague of Ferry, who asked not to be named, said: "Some of us were not sure exactly what his job was at Marconi."

"Officially he was one of two assistant marketing directors and he would make regular trips to Washington. Once I had not seen him for so long that I asked someone if he still worked for us." He described Ferry as a "workaholic" who arrived at work first and left last. He joined Marconi seven years ago after leaving the army as a Brigadier a year earlier.

## HERCULES' RAY ZAPS THEORIES

A strange ray from the binary system of Hercules X-1, 14,000 light years from the Solar System, appears to have 'atomised' the standard model of physics. Radiating from a neutron star in the system, the powerful beam of 1,000,000,000,000,000 ( $1 \times 10^{15}$ ) electron volts was first detected coming from the constellation of Hercules in July 1986, at the Los Alamos National Laboratory, USA.

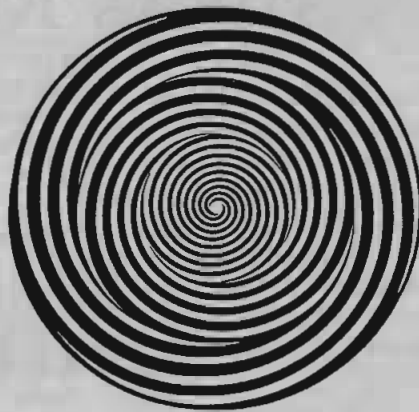
The 'neutron cell' has been estimated as nearly the size of the Moon - quite large for a neutron star, giving it a mass twice that of the Sun. Spinning on its axis about 10 times per second, a neutron star is a massive superconducting magnetic, the residue of a supernova.

The standard model for physics predicts mainly gamma rays radiating from neutron stars that are able to penetrate Earth's atmosphere for detection at the surface. The problem for physics is Hercules' rays were only detected high in the atmosphere in showers of disintegrating particles. This is not supposed to happen in the standard model.

To explain the 'atmospheric dispersion' of the ray, physics may need to consider the possibility of a 'new' particle able to accommodate this finding, according to Dr Darragh Nagle, a physicist at Los Alamos.

The publication of the discovery of this ray was delayed so physicists could double-check the data and attempt to provide preliminary explanations.

- AP



## WHERE'S YOUR FOOD FROM?

DDT residues were detected in 1 in 10 samples of food in a national food survey released in October - but the good news is that this was 4% lower than the previous year. Lead was also detected in wines and illegal levels of cadmium were found in samples of breakfast cereals, vegetables and peanuts. Three types of insecticide were also found in bread.

### *Mother's Milk*

Five different pesticides were detected in samples of milk from nursing mothers, according to the Market Basket (Noxious Substances) Survey 1986, released by the National Health and Medical Research Council. The milk contained dieldrin, HCB, heptachlor epoxide, DDE and DDT. 2.6% of food samples also contained Dieldrin.

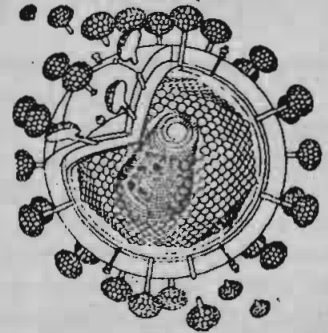
But the survey reports an overall improvement in the purity and healthiness of Australian foods. In no cases were pesticide residues 'unacceptably' high. DDT was only banned last year after it was found in export beef.

Low levels were detected in 109 of 1,075 samples of food taken; beef mince, lamb and pork chops, chicken, canned meat, fish, canned salmon and sardines, eggs, apples, pears and strawberries. Levels were described as 'generally low'.

Unfortunately, these food surveys were recently axed by the Federal Government.

Organic food is available now, probably not far from you. These toxins accumulate at the top of the food chain - in animals. Some organically grown meat is now available as a result of pesticide residue scares, but this is only ONE reason for people to wean themselves off meat.

# AIDS: The Real Story



As regular readers of ANY publication will know, a massive amount of information is printed about AIDS. NEXUS researchers have been sifting this mass for quite some time, and many anomalous features of the spread of AIDS came to our attention - so many that we were led to months of research in biomedical libraries to sort fact from fallacy and downright misinformation.

What we discovered has placed a whole new complexion on the nature of AIDS (Acquired Immuno-Deficiency Syndrome) and HIV (Human Immuno-deficiency Virus). We found so much, in fact, that it doesn't fit in NEXUS - so we've printed a NEXUS Supplement in our usual format to present the startling facts uncovered by other researchers and ourselves.

Called *AIDS - The Real Story*, it tells you all the facts - from the World Health Organization, Government Health departments and reputable scientific journals - which paint a very different picture of the spread of AIDS to that which we are normally shown.

Separated into easily-understood sections including *The Heterosexual Myth*, *The Virus Engineers* and *Aids in Africa*, fully referenced and rounded out with a clear Glossography, *AIDS - The Real Story* shows how media hype and scientific misinformation has helped cover up the probable source of AIDS and divert research from the most promising areas of exploration.

It also clearly illustrates why there's no need to panic, and how AIDS is *not* spreading heterosexually.

*AIDS - The Real Story* is a truly in-depth presentation of the facts behind AIDS, cancer research and presents an overview of what may yet be the tip of a biological iceberg.

If you have trouble finding copies in newsagents or health food stores, this supplement is available direct from NEXUS - see the back inside cover of this issue for details.

## GOD SPEAKS TO US JUST LIKE AT THE TIME OF MOSES

God, the Supreme Spirit, the original Father of all His children, reveals Himself again through His instrument, the prophetess of our time

LIFE TRANSMISSIONS  
take place in 138 Cities  
around the Globe

Detailed Information:

THE CHRIST-STATE  
POB 193, Drummoyne NSW 2047  
Phone: (02) 713 1659





## Canadian Land Rights

Canadian Prime Minister Brian Mulroney signed an agreement last September that returns an area three times the size of Victoria to 39,000 Indians, Eskimos and people of mixed ancestry living along the edge of the Arctic Ocean. Signed at Fort Rae in the Northwest Territories, the agreement gives these people 673,400 square kilometres, about 7% of the land mass of Canada, the second-largest country in the world.

The deal opens up nearly 30% of northern Canada to the beneficiaries and cedes them control of the land for traditional activities.

500 Indians swayed to the beat of drums as the agreement was announced by the PM, completing nearly over a decade of negotiations.

"Once we have our own land, we can make a start on regaining the dignity of our peoples," said Stephen Kakfwi, an Indian leader who pushed for the pact. Only 10% of Canada's population lives in the north.

The agreement involves 13,000 Indians in an area stretching from the northern boundaries of Saskatchewan, Alberta and British Columbia to the Arctic Ocean.

The pact also entitles the Indians to a cash settlement of \$A500 million, paid over 20 years. Another deal still being negotiated will settle claims of 17,000 Eskimos who live in the Northwest Territories in an area including nearly all of Canada's Arctic islands, granting them another 353,600 square kilometres and \$A600 million.

*New York Times*



## Native Animals Save Land

Kenyan rancher David Hopcraft has been conducting experiments on his land on the Athi Plains, 40 km from Nairobi, to demonstrate that Africa's indigenous animals have a profound effect on its soil.

Stocking cattle and gazelles on adjacent plots of land, he has discovered that it may be environmentally and economically necessary to raise native animals rather than livestock.

The land plots occupied by gazelles grew thriving grass, whereas the plots occupied by imported species of cattle grew only sparse vegetation.

Cattle cause a big loss of grass cover, especially around waterholes - at which they must drink more often than native wildlife. But Mr Hopcraft says the real key is a hormone in indigenous animals' saliva, faeces and urine which acts as a catalyst to boost local plant growth.

In Kenya's Rift Valley 25 years ago he saw dust storms that were the first signs of desertification.

"People said it was just overgrazing. But then I realised that could not be because there were fewer animals there than I had seen in wildlife areas," he said. After studying for a

## NATIONS TO SHARE SPACE STATION

Twelve countries are embarking on a joint project to build a what US officials have described as the biggest joint high-technology venture ever undertaken.

The United States, Japan, Canada and the European Space Agency (comprising West Germany, Italy, France, Belgium, Britain, Denmark, the Netherlands, Norway and Spain) have committed a total of around \$A30 billion to the project, according to NASA - over \$A20 billion from the US.

The space station, named *Freedom* by President Reagan, will comprise a large US complex with attached European-made modules operated by an eight-person crew.

But the US is planning to use the station for research and development of their Strategic Defence Initiative (Star Wars) programme. They have reserved the right to conduct research in its own section of the station but agreed not to do so in the modules of other countries without their approval.

Although unable to participate directly, Australia will be a supplier of components.

*Reuter*

## NEW AUSTRALIAN NUCLEAR WASTE DUMP

Plans for a new radioactive waste storage plant in Queensland were announced in late October. To be set up in the Redbank industrial area near Ipswich, west of Brisbane, the plant is needed to replace a 'faulty' plant in Brisbane's central district, according to the Queensland Minister of Health.

master's degree in wildlife science at Cornell University and experimenting on his 8,000 hectare ranch he is convinced native wildlife is good for the land and that imported livestock harm it.

He encourages meat eaters to switch to a diet of native animals and raises about 15 species on his ranch for consumption in Nairobi restaurants. Farming native animals requires less in the way of water supply, fencing, fuel, pumps and research institutes trying to find new ways to keep cattle alive.

*Reuter*



# Radioactive Food

## IRRADIATED FOOD HERE

Cobalt-60, Caesium-137 and Caesium-134 are used to irradiate food for 'preservation'. This process is known as Food Irradiation or 'Ionising Energy Process'. Laboratory animals fed irradiated food have shown abnormally high incidences of; chromosome damage, chronic reproduction problems, leukaemia, reduced lifespan, severe kidney disease and severe testicular tumours.

Irradiating food destroys many vitamins, enzymes, proteins, carbohydrates and amino acids, creating *Unique Radiolytic By-Products* - poorly-understood molecules which differ with each batch and can't be adequately tested - which are suspected to cause these effects. It also produces carcinogens like benzene and formaldehyde.

Irradiation requires production, transport and storage of nuclear materials and is a 'profitable' use for nuclear waste.

## POSSIBLY IRRADIATED

The following foods have possibly been subjected to food irradiation;

Break orange juice (reconstituted - probably from Brazil); Continental Soup; *Embassy*; German Caviar; Glo juices; Go Pet Chew Bone; Iraqi dates; *Kitty's Dinner* - Pilchards in Prawn Jelly; Korean mushrooms; Netherlands or South African foods generally; Popper packs; Prima pack fruit juice; *Snappy Tom*; Thai cooked peeled prawns; US or European herbs or spices ★

- Contact Campaign Against Food Irradiation or Hippocrates Health Centre (075) 30 2860 for more information



## LAUNDERING PLUTONIUM

Two hundred milligrams of plutonium may not seem much, but for Transnuklear - a nuclear waste transport subsidy of NUKEM, West Germany's largest nuclear fuel maker - it was worth enough *not* to declare it to the EEC's nuclear watch-dog, Euratom.

In October 1987, a truck carrying drums of nuclear waste overturned on its way to the Belgian nuclear plant at Mol, now being used for various nuclear 'studies'. Such an accident was bad enough in itself, but when radioactivity was checked at the accident site the levels were far in excess of those stated on documents. What followed has turned into Europe's major nuclear scandal.

It's alleged that the director of waste-handling at Mol was bribed by Transnuklear to accept nuclear waste up to five times more radioactive than documents claimed, compact it, burn it or chemically, treat it and then return it to Nukem for storage. This could only have been achieved if safety officers located at various plants throughout Germany falsified the documents. 80% of these plants have their fuel supplied by Nukem. A safety official at a plant at Hesse committed suicide during investigations into the truck accident, and the manager of Transnuklear was found dead in December 1987 after allegations he had spent A\$10 million in bribes. Transnuklear claims what has been uncovered is a 'few mislabelled shipments' of harmless low-level waste hardly worth counting. But it was worth \$10 million to someone.

Mol is a research institute; 5% of its funds come from handling wastes. Mol has been running a large deficit from a low fund base for several years, and has been touting for business in fuel reprocessing, decontamination and extraction - processes handled on a much larger scale by Nukem.

Why would Nukem, with a reputation to uphold, risk sending illegally described amounts of radioactive wastes half-way across Europe, to have them compacted and treated and then sent back? Investigations have revealed that some doctored documents on return shipments described the waste as 'German' instead of 'Belgian', while back at Mol German waste is marked 'Belgian'. Such an exchange suggests plutonium is being smuggled in low-level wastes (making it highly radioactive), extracted at Mol and returned as low-level waste to Germany. This replaces the German waste used to smuggle the plutonium, which is then transferred into Belgian wastes stored at Mol.

None of this would be necessary if German plants were producing the predicted amounts of plutonium in nuclear reactors. It's been known for some time (within the nuclear industry) that plants produce higher levels of Plutonium than expected. If Nukem is extracting more Plutonium than expected from used fuel rods, then some way would have to be found to conceal the excess plutonium ★

## HOT FOOD

Foods from the following countries may be irradiated with Caesium 137 (half-life 30.2 years, hazardous life of 600 years) from the Chernobyl reactor accident. Avoid them!

### ALL FOODS FROM

Albania	Andora	Austria
Belgium	Bulgaria	Czechoslovakia
Denmark	Fed. Rep. of Germany	
East Germany	Finland	France
Greece	Hungary	Ireland
Italy	Liechtenstein	
Luxembourg	Monaco	Netherlands
Norway	Poland	Portugal
Rumania	San Marino	Spain
Sweden	Switzerland	Turkey
U.K.	U.S.S.R.	Yugoslavia

List taken from Australian Customs Dept (with exception of UK) notice of countries requiring entry permits since Chernobyl.

Importers sometimes repackage and re-label food from some of these countries so that it appears to originate in Australia. In Sydney, for instance, blackcurrant and apricot jams have been marketed by Franklin's under their *No Frills* label imported from Bulgaria. Some foods and herbs labeled as originating in Australia are in fact imported and have merely been packed here ★